

COMPLETE LISTING OF CLAIMS

Claims 1-21 (canceled)

Claim 22 (currently amended): A computer program comprising computer program code means for performing all the steps of ~~claim 16~~ claim 29 when said program is run on a computer.

Claim 23 (currently amended): A computer program comprising computer program code means for performing all the steps of ~~claim 17~~ claim 30 when said program is run on a computer.

Claim 24 (currently amended): A computer program comprising computer program code means for performing all the steps of ~~claim 18~~ claim 31 when said program is run on a computer.

Claim 25 (new): A communication system having a communication network and a plurality of nodes connected to the communication network and in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet, said communication system comprising:

a grouping section that groups said plurality of nodes into a plurality of groups; and

a master setting section that sets, for each of the groups, one of the nodes within the group as a clock master node, wherein the clock master node in each of the groups sends a synchronization signal packet to the communication network after attaching, to the synchronization signal packet, identification information indicative of the group to which the master clock node belongs and an ID indicating itself as the clock master node of the group, and

wherein each of said plurality of nodes that is not set as the clock master node receives, from among a plurality of the synchronization signal packets sent to the communication network, a synchronization signal packet having identification information indicative of the group to which the node belongs and the ID indicative of the clock master node of the group to which the node belongs and performs a synchronization process on the sampling clock thereof on the basis of the received synchronization signal packet.

Claim 26 (new): A communication system as claimed in claim 25, further comprising a designation section that, in response to confirming operation by a user, designates one of said plurality of nodes as a clock master node of a particular one of the groups, wherein, in response to designation by said designation section, said master setting section cancels a clock master setting of the node that has been previously set as the clock master node of the particular group and sets the designated node as a new clock master node of the particular group.

Claim 27 (new): A communication control apparatus for inclusion in a given one of a plurality of nodes connected to a communication network in a communication system in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet transmitted by any one of the plurality of nodes set as a clock master node, the plurality of nodes being grouped into a plurality of node groups, said communication control apparatus comprising:

a storage section that stores group identification information of the group to which the given node belongs;

a synchronization signal packet reception section that receives the synchronization signal packet via the communication network, the synchronization signal packet, transmitted via the communication network, having attached thereto group identification information indicative of the group of each individual node that should receive the synchronization signal packet, said synchronization signal packet reception section selectively receiving the synchronization signal packet transmitted via the communication network on condition that the group identification information attached thereto matches with the group identification information stored in said storage section; and

a synchronization section that performs a synchronization process on the sampling clock of the given node on the basis of the synchronization signal packet received via said synchronization signal packet reception section.

Claim 28 (new): A communication control apparatus for inclusion in a given one of a plurality of nodes connected to a communication network in a communication system in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet transmitted by any one of the plurality of nodes set as a clock master node, the plurality of nodes being grouped into a plurality of node groups, said communication control apparatus comprising:

- a designation section that designates the given node as a clock master node of a particular one of the groups to which the given node belongs;

- a cancellation section that, in response to designation by said designation section, transmits an instruction to another one of the nodes, which has been previously set as the clock master node of the particular group, for canceling a role of the other node as the clock master node;

- a setting section that, in response to designation by said designation section, sets the given node as the new clock master node of the particular group; and

- a synchronization signal packet transmission section that, when the given node is set as the new clock master node of the particular group, generates the synchronization signal packet with group identification information indicative of the particular group attached thereto and transmits the generated synchronization signal packet via the communication network,

wherein each of said plurality of nodes selectively receives the synchronization signal packet of the group to which the node belongs on the basis of the group identification information attached to the synchronization signal packet, and then performs synchronization of the sampling clock thereof on the basis of the received synchronization signal packet.

Claim 29 (new): A communication control method for execution in a communication system having a communication network and a plurality of nodes connected to the communication network and in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet, said plurality of nodes being grouped into a plurality of groups, said method comprising:

a step of setting, for each of the groups, one of the nodes as a clock master node;

a step of causing the one node set as the clock master node in each of the groups to send a synchronization signal packet to the communication network after attaching, to the synchronization signal packet, identification information indicative of the group to which the one node belongs and an ID indicating itself as the clock master node of the group, and

a step of causing each node that is not set as the clock master node to receive, from among a plurality of the synchronization signal packets sent to the communication network, a particular synchronization signal packet having the identification information indicative of the group to which the node belongs and the ID indicative of the clock master node of the group to which the node belongs, and performs a synchronization process on the sampling clock thereof on the basis of the received synchronization signal packet.

Claim 30 (new): A communication control method for execution in a given one of a plurality of nodes connected to a communication network in a communication system in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet transmitted by any one of the plurality of nodes set as a clock master node, the plurality of nodes being grouped into a plurality of node groups, said communication control method comprising:

- a step of storing, in a memory, group identification information of the group to which the given node belongs;

- a step of receiving the synchronization signal packet via the communication network, the synchronization signal packet, transmitted via the communication network, having attached thereto group identification information, said step of receiving selectively receives the synchronization signal packet transmitted via the communication network on condition that the group identification information attached thereto matches with the group identification information stored in the memory; and

- a step of performing a synchronization process on the sampling clock of the given node on the basis of the synchronization signal packet received via said step of receiving.

Claim 31 (new): A communication control method for execution in a given one of a plurality of nodes connected to a communication network in a communication system in which audio data are transferred between the plurality of nodes with respective sampling clocks of the plurality of nodes synchronized via a synchronization signal packet transmitted by any one of the plurality of nodes set as a clock master node, the plurality of nodes being grouped into a plurality of node groups, said communication control method comprising:

a step of designating the given node as a clock master node of a particular one of the groups to which the given node belongs;

a step of, in response to designation by said step of designating, transmitting an instruction to another one of the nodes, which has been previously set as the clock master node of the particular group, to cancel the role of the other node as the clock master node;

a step of, in response to designation by said step of designating, setting the given node as the new clock master node of the particular group; and

a step of, when the given node is set as the clock master node of the particular group, generating the synchronization signal packet with group identification information indicative of the particular group attached thereto and transmitting the generated synchronization signal packet via the communication network,

wherein each of said plurality of nodes selectively receives the synchronization signal packet of the group to which the node belongs on the basis of the group identification information attached to the synchronization signal packet, and then performs synchronization of the sampling clock thereof on the basis of the received synchronization signal packet.